

SEQUENCE LISTING

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 Gallo, Richard L.

<120> THERAPY FOR MICROBIAL INFECTIONS

<130> 15670-076001

<150> US 60/459,924
 <151> 2003-04-02

<160> 16

<170> FastSEQ for Windows Version 4.0

<210> 1
 <211> 513
 <212> DNA
 <213> Homo sapiens

<400> 1
 atgaagaccc aaaggatgg ccactccctg gggcggtggt cactggtgct cctgctgctg 60
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 cgtgctatag atggcatcaa ccagcggtcc tcggatgcta acctctaccg ctcctggac 180
 ctggacccca ggcccacgat gatggggac ccagacacgc caaaggctgt gagcttcaca 240
 gtgaaggaga cagtgtgccc caggacgaca cagcagtac cagaggattt tgacttcaag 300
 aaggacgggc tggtaagcg gtgtatgggg acagtgaccc tcaaccaggc caggggctcc 360
 tttgacatca gttgtgataa ggataacaag agatttccc tgctgggtga tttctccgg 420
 aaatctaaag agaagattgg caaagagttt aaaagaattt tccagagaat caaggatttt 480
 ttgcggaatc ttgtacccag gacagagtcc tag 513

<210> 2
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 2
 Met Lys Thr Gln Arg Asp Gly His Ser Leu Gly Arg Trp Ser Leu Val
 1 5 10 15
 Leu Leu Leu Gly Leu Val Met Pro Leu Ala Ile Ile Ala Gln Val
 20 25 30
 Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Ile Asp Gly Ile Asn Gln
 35 40 45
 Arg Ser Ser Asp Ala Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Arg
 50 55 60
 Pro Thr Met Asp Gly Asp Pro Asp Thr Pro Lys Pro Val Ser Phe Thr
 65 70 75 80
 Val Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Ser Pro Glu Asp
 85 90 95
 Cys Asp Phe Lys Lys Asp Gly Leu Val Lys Arg Cys Met Gly Thr Val
 100 105 110
 Thr Leu Asn Gln Ala Arg Gly Ser Phe Asp Ile Ser Cys Asp Lys Asp
 115 120 125
 Asn Lys Arg Phe Ala Leu Leu Gly Asp Phe Phe Arg Lys Ser Lys Glu
 130 135 140

Lys Ile Gly Lys Glu Phe Lys Arg Ile Val Gln Arg Ile Lys Asp Phe
145 150 155 160
Leu Arg Asn Leu Val Pro Arg Thr Glu Ser
165 170

<210> 3
<211> 103
<212> PRT
<213> Artificial Sequence

<220>
<223> cationic cathelin-like peptide

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<222> 2
<223> Xaa = Ala, Val or Thr

<221> VARIANT
<222> 3
<223> Xaa = Leu or Pro

<221> VARIANT
<222> 6
<223> Xaa = Lys or Arg

<221> VARIANT
<222> 7
<223> Xaa = Glu or Asp

<221> VARIANT
<222> 13
<223> Xaa = Val or Ile

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<223> Xaa = Asn, Asp or Gly

<221> VARIANT
<222> 15
<223> Xaa = Gly, Arg, Asp or Gln

<221> VARIANT
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<223> Xaa = Leu, Ile or Phe

<221> VARIANT
<222> 18
<223> Xaa = Glu or Gln

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<221> VARIANT
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<223> Xaa = Ser or Leu

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<223> Xaa = Asp or Glu

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<223> Xaa = Glu, Ala or Thr

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<221> VARIANT
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<223> Xaa = Ser, Gln or Pro

<221> VARIANT
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<223> Xaa = Gln, Pro, Arg, Glu or Ala

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<223> Xaa = Gly, Ala, Met or Asp

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<221> VARIANT
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<223> Xaa = Gly, Glu or Val

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<223> Xaa = Thr or Ile

<221> VARIANT
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<223> Xaa = Pro or Arg

<221> VARIANT

<222> 46
<223> Xaa = Pro or Ser

<221> VARIANT
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<223> Xaa = Ser or Arg

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<223> Xaa = Thr or Arg

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<221> VARIANT
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<223> Xaa = Pro, Thr or Ala

<221> VARIANT
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<221> VARIANT
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<223> Xaa = Gln, Leu, Asp or Glu

<221> VARIANT
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<223> Xaa = Gly, Asp or Ala

<221> VARIANT
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<221> VARIANT

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<223> Xaa = Ala or Thr

<221> VARIANT

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<223> Xaa = Thr or Ile

<221> VARIANT

<222> 85

<223> Xaa = Asp or Asn

<221> VARIANT

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<223> Xaa = Glu, Pro or Gln

<221> VARIANT

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<223> Xaa = Asp, Ser or Ala

<221> VARIANT

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<223> Xaa = Thr, Ile, Arg, Ala or Asn

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<223> Xaa = Gly, His or Asp

<221> VARIANT

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<223> Xaa = Ser, Tyr or Gln

<221> VARIANT

<222> 91

<223> Xaa = Phe or Leu

<221> VARIANT

<222> 93

<223> Xaa = Ile or Leu

<221> VARIANT

<222> 94

<223> Xaa = Asn or Ser

<221> VARIANT

<222> 96

<223> Xaa = Asn or Asp

<221> VARIANT
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 <223> Xaa = Ser, Glu or Lys

<221> VARIANT
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 <223> Xaa = Ile, Asp, Ala or Leu

<221> VARIANT
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 <223> Xaa = Leu, Gln or Asn

<221> VARIANT
 <222> 100
 <223> Xaa = Ser, Pro, Lys or Gln

<221> VARIANT
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 <223> Xaa = Val, Phe or Arg

<221> VARIANT
 <222> 102
 <223> Xaa = Arg, Phe or Lys

<221> VARIANT
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 <223> Xaa = Phe, Ala, Arg or Lys

<400> 3
 Xaa Xaa Xaa Ser Tyr Xaa Xaa Ala Val Leu Arg Ala Xaa Xaa Xaa Xaa
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 Asn Xaa Xaa Ser Xaa Xaa Xaa Asn Leu Tyr Arg Leu Leu Xaa Leu Xaa
 20 25 30
 Xaa Xaa Pro Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Xaa Lys Xaa Val Xaa
 35 40 45
 Phe Xaa Val Lys Glu Thr Val Cys Xaa Xaa Xaa Xaa Gln Xaa Xaa
 50 55 60
 Glu Xaa Cys Xaa Phe Lys Xaa Xaa Gly Xaa Val Lys Xaa Cys Xaa Gly
 65 70 75 80
 Xaa Val Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Asp Xaa Xaa Cys Xaa
 85 90 95
 Xaa Xaa Xaa Xaa Xaa Xaa
 100

<210> 4
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> spacer peptide

<400> 4
 Gly Gly Gly Gly Ser
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<210> 5
 <211> 22
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> linker moiety

 <400> 5
 Gly Gly Gly Gly Gly Ser Met Phe Gly Gly Ala Lys Lys Arg Ser
 1 5 10 15
 Gly Gly Gly Gly Gly Gly
 20

<210> 6
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 6
 tccgagctcg acgatgacga taagctgctg ggtgatttct tccgg 45

<210> 7
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 7
 ccgctcgagc taggactctg tcctgggtac aagattccg 39

<210> 8
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 8
 ccgctcgagc tactaggcaa atctcttgtt atcctt 36

<210> 9
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> recognition sequence

<400> 9
 Asp Asp Asp Asp Lys

1 5

<210> 10
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus sequence

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<400> 10
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<210> 11
<211> 172
<212> PRT
<213> Canis familiaris

<400> 11
Met Glu Thr Gln Lys Asp Ser Pro Ser Leu Gly Arg Trp Ser Leu Leu
1 5 10 15
Leu Leu Leu Leu Gly Leu Val Ile Thr Pro Ala Ala Ser Arg Ala Leu
20 25 30
Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asn Gly Phe Asn Gln Arg
35 40 45
Ser Ser Glu Glu Asn Leu Tyr Arg Leu Leu Gln Leu Asn Ser Gln Pro
50 55 60
Lys Gly Asp Glu Asp Pro Asn Ile Pro Lys Pro Val Ser Phe Thr Val
65 70 75 80
Lys Glu Thr Val Cys Pro Lys Thr Thr Gln Gln Pro Leu Glu Gln Cys
85 90 95
Gly Phe Lys Asp Asn Gly Leu Val Lys Gln Cys Glu Gly Thr Val Ile
100 105 110
Leu Asp Glu Asp Thr Gly Tyr Phe Asp Leu Asn Cys Asp Ser Ile Leu
115 120 125
Gln Val Lys Lys Ile Asp Arg Leu Lys Glu Leu Ile Thr Thr Gly Ala
130 135 140
Gln Lys Ile Gly Lys Lys Ile Arg Arg Ile Gly Gln Arg Ile Lys Asp
145 150 155 160
Phe Leu Lys Asn Leu Gln Pro Arg Glu Glu Lys Ser
165 170

<210> 12
<211> 172
<212> PRT
<213> Sus scrofa

<400> 12
Met Glu Thr Gln Arg Ala Ser Leu Cys Leu Gly Arg Trp Ser Leu Trp
1 5 10 15
Leu Leu Leu Leu Ala Leu Val Val Pro Ser Ala Ser Ala Gln Ala Leu
20 25 30

Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asp Arg Leu Asn Glu Gln
 35 40 45
 Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Gln Pro Pro
 50 55 60
 Lys Ala Asp Glu Asp Pro Gly Thr Pro Lys Pro Val Ser Phe Thr Val
 65 70 75 80
 Lys Glu Thr Val Cys Pro Arg Pro Thr Arg Gln Pro Pro Glu Leu Cys
 85 90 95
 Asp Phe Lys Glu Asn Gly Arg Val Lys Gln Cys Val Gly Thr Val Thr
 100 105 110
 Leu Asn Pro Ser Ile His Ser Leu Asp Ile Ser Cys Asn Glu Ile Gln
 115 120 125
 Ser Val Arg Arg Arg Pro Arg Pro Pro Tyr Leu Pro Arg Pro Arg Pro
 130 135 140
 Pro Pro Phe Phe Pro Pro Arg Leu Pro Pro Arg Ile Pro Pro Gly Phe
 145 150 155 160
 Pro Pro Arg Phe Pro Pro Arg Phe Pro Gly Lys Arg
 165 170

<210> 13
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 13
 Met Lys Thr Gln Arg Asn Gly His Ser Leu Gly Arg Trp Ser Leu Val
 1 5 10 15
 Leu Leu Leu Leu Gly Leu Val Met Pro Leu Ala Ile Ile Ala Gln Val
 20 25 30
 Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Ile Asp Gly Ile Asn Gln
 35 40 45
 Arg Ser Ser Asp Ala Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Arg
 50 55 60
 Pro Thr Met Asp Gly Asp Pro Asp Thr Pro Lys Pro Val Ser Phe Thr
 65 70 75 80
 Val Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Ser Pro Glu Asp
 85 90 95
 Cys Asp Phe Lys Lys Asp Gly Leu Val Lys Arg Cys Met Gly Thr Val
 100 105 110
 Thr Leu Asn Gln Ala Arg Gly Ser Phe Asp Ile Ser Cys Asp Lys Asp
 115 120 125
 Asn Lys Arg Phe Ala Leu Leu Gly Asp Phe Phe Arg Lys Ser Lys Glu
 130 135 140
 Lys Ile Gly Lys Glu Phe Lys Arg Ile Val Gln Arg Ile Lys Asp Phe
 145 150 155 160
 Leu Arg Asn Leu Val Pro Arg Thr Glu Ser
 165 170

<210> 14
 <211> 173
 <212> PRT
 <213> Mus musculus

<400> 14
 Met Gln Phe Gln Arg Asp Val Pro Ser Leu Trp Leu Trp Arg Ser Leu
 1 5 10 15
 Ser Leu Leu Leu Leu Leu Gly Phe Ser Gln Thr Pro Ser Tyr

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Arg Asp Ala Val Leu Arg Ala Val Asp Asp Phe Asn Gln Gln Ser Leu		
35	40	45
Asp Thr Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Glu Pro Gln Gly		
50	55	60
Asp Glu Asp Pro Asp Thr Pro Lys Ser Val Arg Phe Arg Val Lys Glu		
65	70	75
Thr Val Cys Gly Lys Ala Glu Arg Gln Leu Pro Glu Gln Cys Ala Phe		
85	90	95
Lys Glu Gln Gly Val Val Lys Gln Cys Met Gly Ala Val Thr Leu Asn		
100	105	110
Pro Ala Ala Asp Ser Phe Asp Ile Ser Cys Asn Glu Pro Gly Ala Gln		
115	120	125
Pro Phe Arg Phe Lys Lys Ile Ser Arg Leu Ala Gly Leu Leu Arg Lys		
130	135	140
Gly Gly Glu Lys Ile Gly Glu Lys Leu Lys Lys Ile Gly Gln Lys Ile		
145	150	155
Lys Asn Phe Phe Gln Lys Leu Val Pro Gln Pro Glu Gln		
165	170	

<210> 15

<211> 176

<212> PRT

<213> Capra hircus

<400> 15

Met Glu Thr Gln Gly Ala Ser Leu Ser Leu Gly Arg Trp Ser Leu Trp		
1	5	10
Leu Leu Leu Leu Gly Leu Val Val Pro Leu Ala Ser Ala Gln Ala Leu		
20	25	30
Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Gly Gln Leu Asn Glu Arg		
35	40	45
Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Ala Pro		
50	55	60
Asn Asp Glu Val Asp Pro Gly Thr Arg Lys Pro Val Ser Phe Thr Val		
65	70	75
Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Pro Pro Glu Glu Cys		
85	90	95
Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Val Gly Thr Val Thr		
100	105	110
Leu Asp Pro Ser Asn Asp Gln Phe Asp Ile Asn Cys Asn Glu Leu Gln		
115	120	125
Ser Val Arg Phe Arg Pro Pro Ile Arg Arg Pro Pro Ile Arg Pro Pro		
130	135	140
Phe Asn Pro Pro Phe Arg Pro Pro Val Arg Pro Pro Phe Arg Pro Pro		
145	150	155
Phe Arg Pro Pro Phe Arg Pro Pro Ile Gly Pro Phe Pro Gly Arg Arg		
165	170	175

<210> 16

<211> 129

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<400> 16
Met Glu Thr Gln Arg Ser Ser Leu Gly Arg Trp Ser Leu Leu Leu
1 5 10 15
Leu Gly Leu Val Pro Ala Ile Ala Gln Ala Leu Ser Tyr Arg Glu Ala
20 25 30
Val Leu Arg Ala Val Asp Asn Gln Arg Ser Ser Glu Ala Asn Leu Tyr
35 40 45
Arg Leu Leu Leu Asp Pro Pro Asp Glu Asp Pro Thr Pro Lys Pro Val
50 55 60
Ser Phe Thr Val Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Pro
65 70 75 80
Pro Glu Cys Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Gly Thr
85 90 95
Val Thr Leu Asn Pro Ser Phe Asp Ile Ser Cys Asn Glu Pro Gly Gln
100 105 110
Val Arg Arg Lys Ile Gly Arg Ile Gln Arg Ile Lys Phe Leu Pro Arg
115 120 125
Arg